The Hilltop Institute

analysis to advance the health of vulnerable populations

The Hilltop Health Care Reform Simulation Model

Presentation for the Board of
Maryland Health Benefit Exchange

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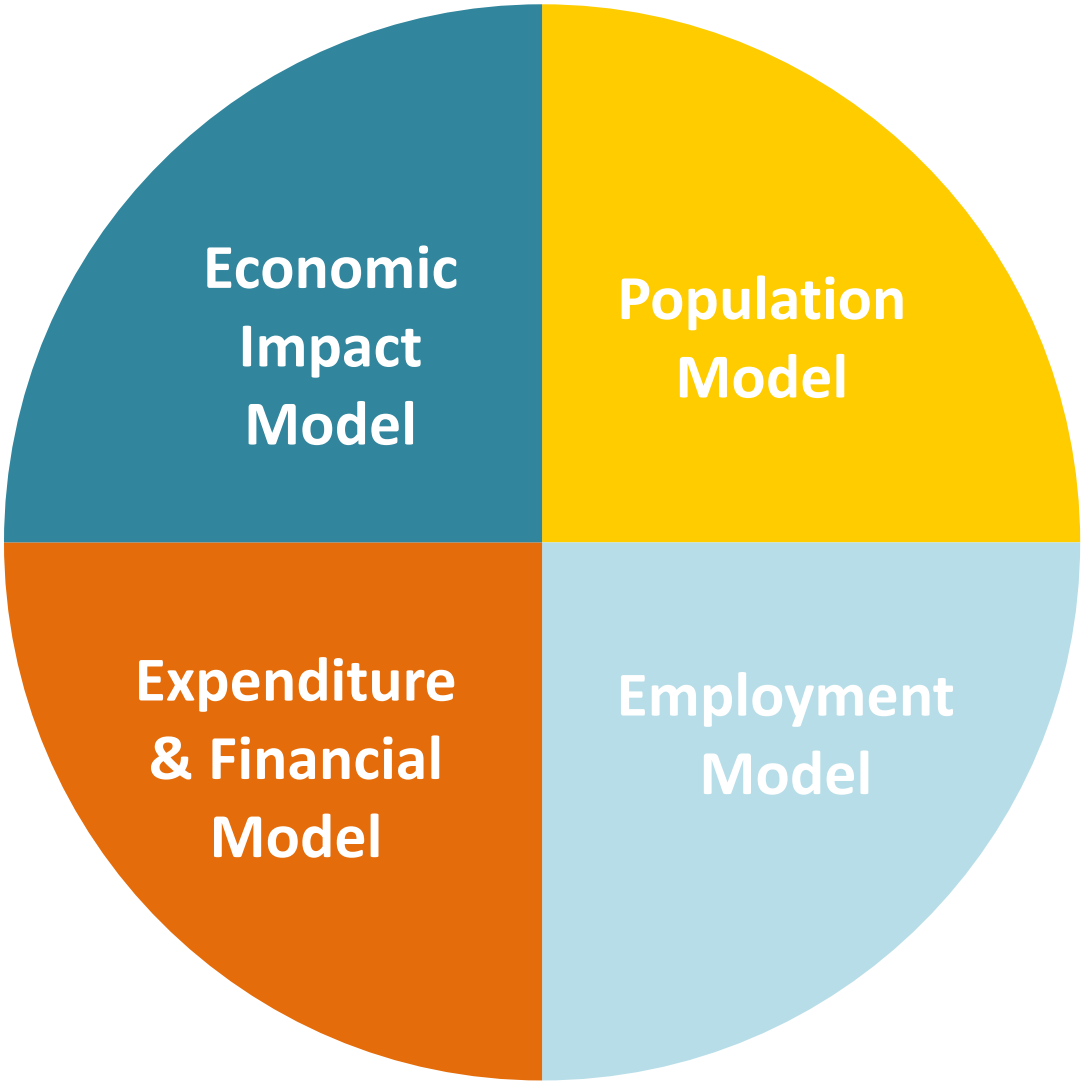
Overview of the Hilltop Health Care Reform Simulation Model

- The model consists of four component models:
  - Population Model
  - Employment Model
  - Expenditure and Financial Model
  - Economic Impact Model

Overview of the Hilltop Health Care Reform Simulation Model



Population Model

Projects:

- **Population and number of uninsured by age group, disability, and FPL (federal poverty level) status**
- Number of people eligible for Medicaid expansion
- Number of individuals who are eligible but not enrolled in Medicaid, but are likely to enroll with health care reform ("woodwork effect")

Current Population Survey: Number of Uninsured Individuals by Percentage of the FPL

Number of Uninsured (2009 to 2010)

Age Group	Income-to-Poverty Ratio, 2009 to 2010						Total
	Below 50%	50% to below 139%	139% to below 150%	150% to below 200%	200% to below 400%	400% and above	
00 to 20	16,494	37,647	8,768	27,038	36,608	13,949	140,504
21 to 64	72,196	117,572	23,340	88,316	189,177	105,635	596,236
65 to 80+	2,216	2,944	649	634	4,362	1,795	12,600
Total	**90,906**	**158,162**	**32,758**	**115,988**	**230,147**	**121,379**	**749,340**

Source: U.S. Census Bureau

Forecasting Numbers of Uninsured

- **To forecast number of uninsured** by age group and FPL status, adjustments are made to Account for:
  - Over-reporting of number of uninsured in the lower FPL categories, and compare to actual Medicaid eligible
  - **The effects of aging of the population,**
  - **Changes in economic conditions.**

Unemployment Rate

- Unemployment rate projections are used in both Population and Employment Models
- Estimated econometric model to forecast state's unemployment rate as a function of national unemployment rate
- Used the long-term forecast of the national unemployment rate published by the Congressional Budget Office (CBO)

Unemployment Rate and Number of Uninsured

- **Increase in unemployment rate leads to decrease in employer-sponsored insurance (ESI)** and increase in number of people with Medicaid coverage (Gruber & Levitt, 2002)
  - Explains recent rapid growth in Medicaid enrollment due to economic recession
  - Addresses the "crowd-out" or "substitution" effects
- **Effects of change in unemployment rates are included in the Population and Employment Models**

Citizenship Status

- **The model takes into account state's population that has U.S. citizenship** and would be eligible for enrollment in Medicaid expansion or for coverage through the exchange, with or without subsidies

Employment Model

- **Projects insurance take-up rate for individuals above 138% of the FPL**
- Three econometric sub-models project ESI and individual direct purchase coverage:
  - Employer Offer of Insurance
  - Employee Take-Up of Insurance
  - Direct Purchase of Insurance

Variables Affecting These Sub-Models

- Unemployment rate
- Price of medical care
- Insurance premiums
- Employee portion of premiums
- Employer penalty under the ACA
- Average workers' income
- Percentage of workers in firms of different sizes

Expenditure & Financial Model

- **These models show summaries of revenues, expenditures, and savings**
- Estimates are based on:
  - Projections of the population and employment models
  - Detailed calculations based on the ACA law and specific to state

Medicaid Expansion

- **Cover individuals with income up to 138% of the FPL**
- Costs of Medicaid Expansion =

  (Number of Medicaid Expansion enrollees)

  multiplied by

  (Average cost per Medicaid enrollee)

Health Status of New Medicaid Enrollees

- Research-Based Assumptions:
  - New Medicaid enrollees will have better health status than existing Medicaid disabled enrollees
  - Similar to current Medicaid Expansion enrollees
  - Eligible individuals with a disability will have largely enrolled in Medicaid by 2014

Federal Medical Assistance Percentage (FMAP)

- FMAP rates for Medicaid Expansion:
  - 100% in federal fiscal years (FFYs) 2014 - 2016
  - 95% in FFY 2017
  - 94% in FFY 2018
  - 93% in FFY 2019
  - 90% in FFY 2020 and later

Impact on Employers and Employees

- Federal assessment of employers under the ACA:
  - Fewer than 50 employees: exempt from penalties
  - More than 50 employees with no insurance coverage: Penalty of $2,000 per employee, excluding 30 employees

Federal Subsidy Payments (Tax Credits) for Individuals

- Insurance premiums of individuals with incomes less than 400% of the FPL will be capped at:

Income % of the FPL	Max Payment
Up to 133%	2.0% of income
134% to 150%	4.0% of income
151% to 200%	6.3% of income
201% to 250%	8.05% of income
251% to 400%	9.5% of income

Economic Impact Model

- Estimates new spending in the state health care sector due to the ACA
- Evaluates the total economic impact of the ACA on the state's economy
- Estimates the effects of spending in health care sector on other sectors of the economy

Impact on the State Economy

- Results of the Simulation Model are used by the IMPLAN input-output model to evaluate the total economic impact of the ACA on the state's economy
- Estimates of increase in employment are included in the Simulation Model through reductions in projected state unemployment rates
- Multiple iterations of the two models are done

Model Output Includes

- Flow of new federal funds through the state economy
- Additional state products/outputs generated
- Total uninsured (with and without ACA)
- Uninsured as % of total population
- New employment due to ACA
- Unemployment rate with and without ACA
- Federal subsidies to individuals
- Increases in health care expenditures

Population Insurance Coverage Status (1000s)

	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20
Total Maryland Population	**5,924**	**5,962**	**6,013**	**6,064**	**6,114**	**6,165**	**6,216**
Medicaid	1,088	1,129	1,156	1,185	1,208	1,227	1,244
Medicare	833	860	893	926	958	991	1,024
CHAMPUS/Tricare	188	187	186	185	184	184	183
Commercial Insurance Coverage	3,248	3,280	3,282	3,283	3,285	3,284	3,285
Maryland Health Benefit Exchange	147	170	184	208	235	258	284
Total Uninsured	599	514	489	473	440	415	390
Adjustment for Dual Coverage	-178	-178	-178	-196	-196	-194	-193
Total Coverage including Dual Coverage	**6,103**	**6,140**	**6,191**	**6,260**	**6,310**	**6,360**	**6,409**

The Economic Impact of the ACA (in Millions)

	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20
Federal Subsidies to Individuals (Tax Credits)	$224	$535	$607	$716	$849	$987	$1,153
Federal Cost-Sharing Payments to Individuals	$30	$72	$80	$92	$108	$124	$142
Total Federal Payments for Cost Sharing and Subsidies (Tax Credits)	$254	$607	$687	$808	$957	$1,111	$1,295
Increase in Total Health Care Expenditures	$1,057	$2,085	$2,321	$2,719	$3,111	$3,497	$3,930
Additional Output Generated	**$1,174**	**$2,020**	**$2,123**	**$2,421**	**$2,693**	**$2,965**	**$3,283**
Total Additional State and Local Taxes Generated	$61	$140	$147	$169	$191	$212	$237

Population Uninsured, Number of New Jobs (in Thousands), and Unemployment Rate

	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20
Total Uninsured without ACA	746	736	728	719	719	722	724
Total Uninsured with ACA	599	514	489	473	440	415	390
Number of New Individuals Insured with ACA Law	**147**	**221**	**239**	**246**	**279**	**307**	**333**
Uninsured as % of Total Population (without ACA)	12.6%	12.3%	12.1%	11.9%	11.8%	11.7%	11.6%
Uninsured as % of Total Population (with ACA)	10.1%	8.6%	8.1%	7.8%	7.2%	6.7%	6.3%
New Employment due to ACA	**9**	**16**	**17**	**20**	**22**	**24**	**26**
Unemployment Rate without ACA	6.9%	5.8%	5.0%	4.5%	4.3%	4.3%	4.3%
Unemployment Rate with ACA	6.7%	5.5%	4.6%	4.1%	3.9%	3.8%	3.7%
Change in Unemployment Rate	**-0.2%**	**-0.4%**	**-0.4%**	**-0.4%**	**-0.5%**	**-0.5%**	**-0.6%**

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